

### REMARKS

Applicant has carefully reviewed this Application in light of the Office Action mailed March 24, 2008. Claims 18-47 are pending in this Application and Claims 1-17 were previously cancelled due to an election/restriction requirement. Claims 18-20, 24-26, 30-32 and 38-41 stand rejected under 35 U.S.C. § 102(e) and Claims 21-23, 27-29, 33-37 and 42-47 stand rejected under 35 U.S.C. § 103(a). Claim 30 has been amended to correct a typographical error. Applicant respectfully requests reconsideration and favorable action in this case.

#### Status of Claims

On the Office Action Summary of the Final Office Action mailed March 24, 2008, the Examiner lists Claims 1-47 as pending in the application. Claims 1-17 were canceled by the Applicant in the Response to the Election/Restriction Requirement filed on April 19, 2007.

#### Rejections under 35 U.S.C. § 102

Claims 18-20, 24-26, 30-32, and 38-41 stand rejected by the Examiner under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent 6,858,844 issued to Joachim Zach ("Zach").

Zach discloses a method for detecting geometrical-optical aberrations in a scanning electron microscope. (Abstract). An object is imaged with a focused, an overfocused, and an underfocused particle beam to produce three images that are subjected to a Fourier transformation. (Col. 5, lines 51-54). The transformations of the overfocused image and underfocused image are divided by the transformed focused image, with the results reverse transformed to determine brightness profiles of the images in overfocus and underfocus. (Col. 5, lines 54-61).

Claim 18 recites a method for detecting differences between complex images, comprising "comparing the modified complex image with the second complex image."

Claim 26 recites a method for detecting differences between complex images, comprising “comparing high frequency components of the transformed complex image with high frequency components of the second complex image.”

Claim 30 recites a system for detecting differences between complex images, comprising processing resources operable to “compare the modified complex image with the second complex image.”

Claim 38 recites a method for detecting differences between complex images comprising “correcting the aberration value difference by . . . comparing the modified first complex image with the second complex image in a high frequency range.”

Applicant submits that *Zach* fails to teach, either expressly or inherently, all of the elements of the claimed embodiment of the invention. Specifically, *Zach* fails to teach at least “comparing the modified complex image with the second complex image,” as recited in Claim 18. Additionally, *Zach* fails to suggest a method for detecting differences between complex images comprising “comparing high frequency components of the transformed complex image with high frequency components of the second complex image,” as recited by Claim 26. *Zach* also fails to disclose a system for detecting differences between complex images, comprising processing resources operable to “compare the modified complex image with the second complex image,” as recited by Claim 30. Further, *Zach* fails to teach or suggest a method for detecting differences between complex images comprising “correcting the aberration value difference by . . . comparing the modified first complex image with the second complex image in a high frequency range,” as recited by Claim 38.

In rejecting Claims 18, 26, 30 and 38, the Examiner alleges that in *Zach*, a focused image is compared with an underfocused image and a focused image is compared with an overfocused image, and therefore, *Zach* purportedly discloses “comparing the modified complex image with the second complex image” as recited in Claims 18, 30 and 38 and “comparing high frequency components of the transformed complex image with high frequency components of the second complex image” as recited in Claim 26. (Office Action, Pages 3 and 5). However, Applicant notes that even if the mathematical division operation performed between the Fourier-

transformed focused image and Fourier-transformed underfocused image and the mathematical division operation performed between the Fourier-transformed focused image and Fourier-transformed overfocused image can be considered comparisons (which Applicant does not concede), *Zach* fails to disclose comparison of a modified first complex image with a second complex image.

In the Office Action, the Examiner alleges that because *Zach* teaches the capture of a focused image is “repeated” to capture the same image underfocused and overfocused, such underfocused and overfocused image captures constitute “iteratively modifying the first complex image by each of the aberration functions,” as recited in Claims 18, 26, 30, and 38. In addition, as discussed above, the Examiner also seems to assert that the alleged “comparison” of the overfocused and underfocused images to the focused image constitutes comparison of a “modified first image” with a “second image.” However, assuming the overfocused and underfocused images are “modified” images (which Applicant does not concede), the Examiner’s alleged “comparison” of overfocused and underfocused images is not the “comparison” of a “modified first image” to a “second image,” but rather would be a “comparison” of a modified first image to the first image itself.

Stated another way, if *Zach*’s first complex image is indeed “iteratively modified” by underfocusing and overfocusing the focused image (which Applicant does not concede) it is these modified underfocused and overfocused images that must be compared to a second complex image for *Zach* to read on Applicant’s claims. However, the Examiner seems to state in his rejection that *Zach*’s purported modified focused image (e.g., the underfocused and overfocused image) is also the claimed second complex image. (Office Action, Page 5). Thus, if the claimed second complex image is analogous to the overfocused image and the *iteratively* modified first complex image (the underfocused and overfocused image) is compared to the overfocused image, the comparison would necessarily require comparison of the overfocused image to itself, which does not make sense. To equate one of the underfocused and overfocused images to both the second complex image and the modified complex image, is improper, as

Applicant's claims clearly indicate that the modified complex image and second complex image are separate images.

For at least these reasons, Applicant respectfully submits that Claims 18, 26, 30 and 38 are not anticipated by *Zach*. Given that Claims 19, 20, 24 and 25 depend from Claim 18, Claims 31 and 32 depend from Claim 30, and Claims 39-41 depend from Claim 38, Applicant submits that Claims 19, 20, 24, 25, 31, 32 and 39-41 are also allowable. As such, Applicant respectfully requests reconsideration and withdrawal of the rejections under 35 U.S.C. § 102(e) and full allowance of Claims 18-20, 24-26, 30-32, and 38-41.

**Rejections under 35 U.S.C. § 103**

Claims 21-23, 27-29, 33-37, and 42-47 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Zach* in view of U.S. Patent 6,262,818 issued to Etienne Chuche et al. ("*Chuche*"). Although Applicant makes no concessions regarding this rejection, Applicant believes that: (a) Claims 21-23 are allowable at least because they depend from Claim 18 shown to be allowable above, (b) Claims 27-29 are allowable at least because they depend from Claim 26 shown to be allowable above, (c) Claims 33-37 are allowable at least because they depend from Claim 30 shown to be allowable above, and (d) Claims 42-47 are allowable at least because they depend from Claim 38 shown to be allowable above. Therefore, Applicant requests reconsideration and withdrawal of the rejection under 35 U.S.C. § 103(a) and full allowance of Claims 21-23, 27-29, 33-37, and 42-47.

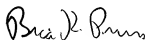
**CONCLUSION**

Applicant has made an earnest effort to place this case in condition for allowance in light of the amendments and remarks set forth above. Applicant respectfully requests reconsideration of Claims 18-47 as amended.

Applicant believes there are no fees due at this time; however, the Commissioner is hereby authorized to charge any fees necessary or credit any overpayment to Deposit Account No. 50-2148 of Baker Botts L.L.P.

If there are any matters concerning this Application that may be cleared up in a telephone conversation, please contact Applicant's attorney at 512.322.2684.

Respectfully submitted,  
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